

EXAMPLE 3

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for Exs. 29–34

MENTAL MATH Solve the equation using mental math.

29. $x + 8 = 13$

30. $y + 16 = 25$

31. $z - 11 = 1$

32. $5w = 20$

33. $8b = 72$

34. $\frac{f}{6} = 4$

EQUATIONS AND INEQUALITIES In Exercises 35 and 36, write an open sentence. Then check whether $3\frac{1}{2}$ is a solution of the open sentence.35. 2 less than the product of 3 and a number x is equal to the sum of x and 5.36. 4 more than twice a number k is no greater than the sum of k and 11.37.  **TAKS REASONING** Which equation has the same solution as $z - 9 = 3$?

Ⓐ $z - 4 = 16$

Ⓑ $\frac{1}{2}z = 7$

Ⓒ $z + 15 = 27$

Ⓓ $5z = 45$

38. **CHALLENGE** Use mental math to solve the equation $3x + 4 = 19$. *Explain* your thinking.**PROBLEM SOLVING****EXAMPLES 4 and 5**

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39. **CHARITY WALK** You are taking part in a charity walk, and you have walked 12.5 miles so far. Your goal is to walk 20 miles. How many more miles do you need to walk to meet your goal?

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40. **COMPACT DISCS** You buy a storage rack that holds 40 CDs. You have 27 CDs. Write an inequality that describes how many more CDs you can buy and still have no more CDs than the rack can hold. You buy 15 CDs. Will they all still fit?

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41. **ECO-CHALLENGE** Eco-Challenge Fiji was a competition that included jungle trekking, ocean swimming, mountain biking, and river kayaking. In 2002, the U.S. team finished second about 6 hours after the winning team from New Zealand. The U.S. team finished in about 173 hours. What was the winning team's time?

42. **BAKING MEASUREMENTS** You are baking batches of cookies for a bake sale. Each batch takes 2.5 cups of flour. You have 18 cups of flour. Can you bake 8 batches? *Explain*.43. **EMPLOYMENT** Your friend takes a job cleaning up a neighbor's yard and mowing the grass, and asks you and two other friends to help. Your friend divides the amount the neighbor pays equally among all the members of the group. Each of you got \$25. How much did the neighbor pay?44.  **TAKS REASONING** Describe a real-world situation you could model using the equation $5x = 50$. Use mental math to solve the equation. *Explain* what the solution means in this situation.